

Unofficial Translation of [Draft Notification 3.0](#) published on February 1, 2023

Ministry of Economy, Trade and Industry Notification No. [XXXX]

Based on the provisions of Article 5, Paragraph 1 of the Law Concerning the Promotion of Environmentally Conscious Use of Energy Sources and Effective Use of Fossil Energy Raw Materials by Energy Suppliers¹ notified by the Ministry of Economy, Trade and Industry (Law No. 72 of 2009), judgment criteria for determining environmentally appropriate use of energy sources for oil refiners has been established as followings.

[Date]

Minister of Economy, Trade and Industry
[Name]

¹ It is known as the Sophisticated Act.

Judgment criteria for determining environmentally appropriate use of energy sources for oil refiners (draft)

For the businesses that manufacture and supply gasoline stipulated in Article 5.3 of the Enforcement Ordinance of the Law on the Promotion of Environmentally Appropriate Use of Energy Sources and Effective Use of Fossil Energy Raw Materials by Energy Suppliers (2009 Government Ordinance No. 222; hereafter referred to as the "Ordinance") of specific energy suppliers provided in Article 2.7 of the Law on the Promotion of Environmentally Appropriate Use of Energy Sources and Effective Use of Fossil Energy Raw Materials by Energy Suppliers (2009 Law No. 72; hereafter referred to as the "Law") (such businesses are hereafter referred to as "oil refiners"), this document defines the judgment criteria that oil refiners should use for determining environmentally appropriate use of energy sources according to Article 5.1 of the Law.

The judgment criteria for determining the use of non-fossil energy sources for oil refiners (2018 METI Notification No. 85) are hereby revoked.

1. Goals and implementation method for environmentally appropriate use of energy sources

- (1) Oil refiners shall use a mixture of gasoline and bioethanol as automobile fuel for environmentally appropriate use of energy sources. The total target usage of bioethanol by oil refiners for the five-year period from Japanese fiscal year (JFY)² 2023 to JFY 2027 is a crude oil equivalent of 500,000,000 liters per fiscal year.

In addition, the total target usage of next-generation bioethanol (bioethanol made using the materials and technologies described in Remark v) in 1., of which the emissions of greenhouse gases (hereafter referred to as "GHG") calculated according to (2) are less than 10 percent that of gasoline; this definition applies throughout this document) by oil refiners for the five-year period from JFY 2028 to JFY 2032 is, in principle, an ethanol equivalent of 10,000,000 liters per fiscal year.

Note that the total target usage of next-generation bioethanol is included in the total target usage of bioethanol.

- (2) Oil refiners that must submit a plan to the Minister of Economy, Trade, and Industry according to Article 7.1 of the Law (hereafter referred to as "specific oil refiners") shall aim to use, during the current fiscal year, the amount calculated by dividing the supply amount of gasoline for the relevant specific oil refiner in the fiscal year two years prior by the total supply amount of gasoline for all specific oil refiners in the fiscal year two years prior and multiplying the quotient by the total target usage of bioethanol for the current fiscal year as shown in the following formula.

² The Japanese fiscal year begins in April and ends in March. JFY 2023-2027 means April 2023-March 2028.

$$\text{Target usage of bioethanol for a specific oil refiner for the current fiscal year} = \frac{\text{Supply amount of gasoline for the relevant specific oil refiner two fiscal years prior}}{\text{Total supply amount of gasoline for all specific oil refiners two fiscal years prior}} \times \text{Total target usage of bioethanol for the current fiscal year}$$

No target usage per specific oil refiner has been set to achieve the next-generation bioethanol target usage of 10,000,000 liters. All specific oil refiners shall attempt to reach this goal with their total supply amount.

- (3) To achieve the target usage of bioethanol, specific oil refiners can take the following measures.
- 1) When specific oil refiner (1) is the parent company, subsidiary, or affiliated company (hereafter referred to as "affiliated company") of specific oil refiner (2), etc., or specific oil refiners (1) and (2) are affiliated companies of the same oil wholesaler, etc., if specific oil refiner (1) increases its target usage of bioethanol, specific oil refiner (2) can decrease its target usage by an amount equivalent to the increase by specific oil refiner (1).
 - 2) If specific oil refiner (1) increases its target usage of bioethanol based on a contract with specific oil refiner (2) (only when specific oil refiner (2) cannot achieve the target usage of bioethanol for the current fiscal year due to reasonable reasons), specific oil refiner (2) can decrease its target usage by an amount equivalent to the increase by specific oil refiner (1).
 - 3) If a specific oil refiner uses a quantity of bioethanol above the target usage of bioethanol for the current fiscal year, said refiner can carry forward the surplus above the relevant target amount to achieve the target usage for the following fiscal year. Note that the amount carried forward to the following fiscal year may only be included in calculations to achieve the target usage during that fiscal year.
 - 4) If a specific oil refiner cannot achieve the target usage of bioethanol for the current fiscal year due to reasonable reasons, said refiner can report such fact to the Minister of Economy, Trade, and Industry during the current fiscal year; increase its target usage for the following fiscal year; and decrease its target usage for the current fiscal year by an amount equivalent to the increase. However, note that the upper limit of the decrease from the target usage for the current fiscal year is 20 percent of the target usage for the current fiscal year.
 - 5) A specific oil refiner shall procure the target usage of next-generation bioethanol from JFY 2028 to JFY 2032 through competitive bidding by that refiner or its agency or multiple specific oil refiners or their agency or other means once bidding conditions, etc. are ready after the appointed day of this notification.

- 6) Specific oil refiners shall, in principle, procure next-generation bioethanol from the successful bidder of the competitive bidding (hereafter referred to as the "next-generation bioethanol supplier") from JFY 2028 to JFY 2032. However, if there are other suppliers of next-generation bioethanol and the related parties agree, specific oil refiners can change their next-generation bioethanol supplier.
- 7) If the Minister of Economy, Trade, and Industry acknowledges that economical, stable procurement of next-generation bioethanol is difficult as a result of competitive bidding, specific oil refiners can use first-generation bioethanol (bioethanol other than next-generation bioethanol) as an alternative to achieve their target amounts.
- (4) If a report on the supply of bioethanol is received according to 3.(2), the Minister of Economy, Trade, and Industry shall conduct necessary research and issue a notification on lowering the target usage of bioethanol or other actions that oil refiners should take in an emergency if the Minister deems it necessary to do so as a result of said research. Oil refiners shall take the necessary actions in light of the relevant notification.
- (5) When a specific oil refiner uses sustainable aviation fuel (hereafter referred to as "SAF"), said refiner can include the ethanol equivalent obtained by converting the used SAF in terms of calorific value when calculating the target usage of bioethanol.

Remarks

- i) If a whole business that manufactures and supplies gasoline is transferred or if a business that manufactures and supplies gasoline is inherited through a succession, merger, or division (only if the whole business is inherited), the supply amount of gasoline manufactured and supplied by the corporation that transferred the relevant business or the corporation that ran the relevant business and went through succession, etc. shall be regarded as the supply amount of gasoline manufactured and supplied by the corporation that received the relevant business or the corporation that inherited through succession, etc. the corporation that ran the relevant business.
- ii) Even if the supply amount of manufactured and supplied gasoline of an oil refiner does not meet the requirements stipulated in Article 7.3 of the Ordinance, said refiner shall be regarded to be a specific oil refiner if that refiner outsources manufacturing to a corporation that manufactured 600,000,000 liters or more of gasoline in the previous fiscal year (including manufacturing amounts outsourced from third parties, but excluding manufacturing amounts outsourced to third parties, import amounts, and import amounts outsourced to third parties).
- iii) When calculating the target usage of bioethanol for a specific oil refiner for the current fiscal year in 1.(2), use the total supply amount of gasoline for all specific oil refiners in the fiscal year two years prior released by the Ministry of Economy, Trade, and Industry.
- iv) Bioethanol can be directly mixed in gasoline, or ethyl tertiary-butyl ether synthesized from bioethanol can be mixed in gasoline.

- v) The materials and technologies referred to in 1(1) are shown below. When calculating the target usage of bioethanol, specific oil refiners can double the usage amount of next-generation bioethanol. However, bioethanol made of 2) and 3) shall be regarded as next-generation bioethanol for the time being even if its GHG emissions are 10 percent or more that of gasoline.
- 1) Cellulosic materials such as herbaceous plants and trees (except 2)
 - 2) Cellulosic materials in collected used products (e.g., wastepaper)
 - 3) Carbon recycling technologies (technologies to manufacture biofuel, etc. through biological, chemical, or other processes by absorbing oxocarbon)
- vi) Specific oil refiners must attempt to reduce GHG emissions when using bioethanol made of 2) or 3) in v).
- vii) When calculating the target usage of bioethanol, specific oil refiners can double the usage amount of SAF made of the materials listed below.
- 1) Cellulosic materials such as herbaceous plants and trees (except 2)
 - 2) Cellulosic materials in collected used products (e.g., wastepaper)
 - 3) Carbon recycling technologies (technologies to manufacture biofuel, etc. through biological, chemical, or other processes by absorbing oxocarbon)
 - 4) Microalgae
 - 5) Used cooking oil
 - 6) Animal fat and oils
 - 7) Other non-edible oils (only those that are unlikely to indirectly change land use or to decrease soil carbon stock)
- viii) The following formula can be used to calculate the multiple for in the case in which next-generation bioethanol introduced through competitive bidding according to 1.(3)5) conducted after competitive bidding under conditions in which the usage amount of next-generation bioethanol can be doubled and accounted for fails to be accounted for. However, the upper limit of new next-generation bioethanol introduced based on 1.(3)6) is double the usage amount.

$$\text{Multiple for target usage of next-generation bioethanol} = \frac{\text{Next-generation bioethanol price} - \text{Gasoline price}}{\text{Bioethanol price} - \text{Gasoline price}}$$

2. GHG emissions calculation and reduction standards

- (1) Oil refiners must calculate GHG emissions from bioethanol in life cycle assessment (hereafter referred to as "LCA") and attempt to use bioethanol that meets the GHG emissions reduction standards in (3). (The calculated GHG emissions are hereafter referred to as "GHG emissions in LCA.") Note that specific oil refiners must use bioethanol that meets the relevant GHG emissions reduction standards to achieve the target usage of bioethanol.
- (2) Oil refiners shall use one of the following methods to calculate GHG emissions in LCA of bioethanol.
 - 1) Calculation method using a calculation formula
Calculate GHG emissions in LCA of bioethanol based on the calculation formula defined in Attached Table 1.
 - 2) Calculation method using predetermined values
For some bioethanols for which the components of GHG emissions in LCA are predetermined in Attached Table 2, the total of the relevant predetermined values can be regarded as the GHG emissions in LCA. (However, it must be confirmed that the materials and country of origin of the bioethanol meet the conditions described in Attached Table 2.)
The value calculated by assigning the predetermined values in Attached Table 2 to the components in the calculation formula defined in Attached Table 1 can also be regarded as the GHG emissions in LCA of bioethanol.
- (3) The GHG emissions reduction standards are as follows.
 - 1) The GHG emissions in LCA of bioethanol must be less than 40 percent of the GHG emissions in LCA of gasoline (88.74 gCO₂eq/MJ).
 - 2) Even bioethanol that does not meet the condition in 1) is considered to meet the condition for the time being so long as the value obtained by weighted averaging of the GHG emissions in LCA of all bioethanol used in the current fiscal year with the following formula is less than 40 percent of GHG emissions in LCA of gasoline (88.74 gCO₂eq/MJ). (The value obtained by weighted averaging of GHG emissions in LCA of all the bioethanol supplied by the relevant business with the following formula can be used as the GHG emissions in LCA of bioethanol procured from said business.)

$$\begin{array}{c} \text{GHG emissions} \\ \text{in LCA of fuel A} \\ \text{(gCO}_2\text{eq/MJ)} \end{array} \times \frac{\begin{array}{c} \text{Usage amount of} \\ \text{fuel A during the} \\ \text{fiscal year (L)} \end{array}}{\begin{array}{c} \text{Introduction} \\ \text{target for} \\ \text{bioethanol (L)} \end{array}} + \begin{array}{c} \text{GHG emissions} \\ \text{in LCA of fuel B} \\ \text{(gCO}_2\text{eq/MJ)} \end{array} \times \frac{\begin{array}{c} \text{Usage amount of} \\ \text{fuel B during the} \\ \text{fiscal year (L)} \end{array}}{\begin{array}{c} \text{Introduction} \\ \text{target for} \\ \text{bioethanol (L)} \end{array}} + \dots < \begin{array}{c} \text{GHG emissions} \\ \text{in LCA of} \\ \text{gasoline (88.74} \\ \text{gCO}_2\text{eq/MJ)} \end{array} \times 40\%$$

3. What oil refiners must do at procurement

- (1) When procuring bioethanol, oil refiners shall give due consideration to the following matters:
 - 1) The bioethanol or bioethanol materials to be procured have been produced in accordance with the laws and regulations of the countries where such materials were produced;
 - 2) Procurement of bioethanol will not affect food prices; and
 - 3) The production of the bioethanol to be procured has not affected the ecosystem or environment in the countries where such materials were produced.
- (2) Oil refiners shall promptly report to the government if they obtain any information on the following matters:
 - 1) The occurrence of an event that makes it difficult for the oil refiner to give due consideration to the matters listed in 3.(1); or
 - 2) The occurrence of an event that makes it difficult to achieve the target usage of bioethanol defined in 1.(1)—for example, if production of bioethanol materials decreases due to a disaster or other unavoidable reason.

4. Other actions to be taken according to the plan to achieve the goals for environmentally appropriate use of energy sources

- (1) Oil refiners must attempt to promote the technological development of bioethanol made of cellulose such as herbaceous plants or trees, algae, waste, or other materials that does not directly compete with food and that does not greatly affect the ecosystem or environment as well as to introduce such bioethanol from a mid- to long-term perspective.
- (2) Oil refiners must attempt to install facilities to process and mix bioethanol as well as to improve existing facilities in order to promote the use of bioethanol.

Attached Table 1**About the Calculation Methods of GHG Emission from Ethanol by LCA****1. Subjected gasses**

- (1) The types of GHGs subject to calculation shall be CO₂ (except CO₂ emitted in combustion of waste and biomass), CH₄, and N₂O. The values of the global warming potential of CH₄ and N₂O (the coefficient used to convert the amounts of CH₄ and N₂O emissions into those of CO₂ emissions) shall be assumed to be 25 and 298, respectively.
- (2) Calculations for CH₄ and N₂O shall be performed based on the emissions amounts from each process within the range from raw-material cultivation to fuel transport.

2. Calculation boundaries and formula

- (1) Calculation shall be performed for direct land-use changes and each of the following processes: raw-material cultivation and collection, raw-material transport, fuel production, and fuel transport (to an oil refinery).
- (2) When a byproduct is produced, part of the GHG emissions amount can be deducted from the GHG emissions of bioethanol by distribution (allocation) to the relevant byproduct.
- (3) Avoided emissions can be regarded as the contribution to emissions reduction when CH₄ emissions due to anaerobic fermentation of organic matter or CH₄ and N₂O emissions due to incineration disposal of organic matter can be avoided by using waste and residues, or when GHG emissions can be avoided by improving the agricultural management method or performing carbon capture and sequestration as well as carbon capture and replacement.

(Calculation formula)

$$E_{\text{bioethanol}} = E_{\text{land}} + E_{\text{cultivate}} + E_{\text{biomass_transport}} + E_{\text{produce}} + E_{\text{biofuel_transport}} - ER_{\text{sca}} - ER_{\text{ccs}} - ER_{\text{ccr}}$$

$E_{\text{bioethanol}}$:	GHG emissions amount due to bioethanol use
E_{land} :	Emissions amount due to direct land-use change
$E_{\text{cultivate}}$:	Emissions amount due to raw-material cultivation and collection
$E_{\text{biomass_transport}}$:	Emissions amount due to raw-material transport
E_{produce} :	Emissions amount due to fuel production
$E_{\text{biofuel_transport}}$:	Emissions amount due to fuel transport
ER_{sca} :	Reduction in emissions amount due to agricultural management method improvements
ER_{ccs} :	Reduction in emissions amount due to carbon capture and sequestration
ER_{ccr} :	Reduction in emissions amount due to carbon capture and replacement (Emissions reduction is achieved by capturing biomass-derived CO ₂ and substituting it for CO ₂ derived from fossil fuels used as materials.)

(Remarks 1)

i) Direct land-use change

- (1) When a direct land-use change (a change in the form of land use in the same place) occurs, the change in the carbon stock on and in the ground due to said direct land-use change shall be evenly distributed over a 20-year period. Specifically, the following formula is used to calculate.

Emissions due to a direct land-use change (t-CO₂/MJ) = $(CS_R - CS_A) * 44 / 12 / 20 / P / 1000$

CS_R: Carbon stock in soil and vegetation before the direct land-use change (t-C/ha)

CS_A: Carbon stock in soil and vegetation under the land-use form during raw-material procurement (t-C/ha)

P: Biofuel production per unit area from the raw materials (calorie basis) (GJ/ha)

- (2) Calculations for direct land-use changes must be performed based on materials published by the Intergovernmental Panel on Climate Change (IPCC) or internationally impartial, neutral data. However, when bioethanol for which calculations using such materials or data is difficult to perform must be unavoidably procured to ensure stable procurement of bioethanol or for a similar reason, business operators shall be permitted to perform calculations by using available materials or data.
- (3) The starting date for calculation shall be April 1, 2012.

ii) Raw-material cultivation and collection process

- (1) In the raw-material cultivation and collection process, GHG emissions due to consumption of fossil fuels, electricity, and heat used for raw-material cultivation and harvest; the production and procurement of necessary fertilizers and chemicals; and the fermentation of organic matter and fertilization must be taken into account.
- (2) Agricultural management improvements increase the carbon stock in soil. When the increased amount can be determined quantitatively, it can be deducted from the GHG emissions amount in bioethanol LCA.
- (3) When generated CO₂ is captured and sequestered or replaced, it can be deducted from the emissions amount.
- (4) When waste- or residue-based materials are used as raw materials, only the GHG derived from energy consumed for collecting said raw materials shall be taken into account. In cases in which conventional GHG emissions (e.g., CH₄ emissions due to anaerobic fermentation of organic matter) can be avoided by using waste or residues, the avoided amount, when it can be determined quantitatively, can be deducted from the GHG emissions amount in bioethanol LCA.
- (5) For the time being, leakage occurring in the use of waste- or residue-based raw materials shall be included in the items subject to governmental monitoring. No calculation of leakage shall be required of business operators.
- (6) Emission factors determined based on LCA shall be applied to fossil fuels and electricity.

iii) Raw-material transport process

- (1) In the raw-material transport process, GHG emissions due to consumption of fossil fuels, electricity, and heat used for transport, storage, and intermediate treatment of raw materials shall be taken into account.
- (2) When raw materials are transported together with other freight articles, their corresponding emissions shall be determined by proportionally distributing the energy consumption of the relevant means of transport according to weight.
- (3) When a return trip is made with the means of transport unloaded, the energy consumption of said return trip must be taken into account.
- (4) Emission factors determined based on LCA shall be applied to fossil fuels and electricity.

iv) Fuel production process

- (1) In the fuel production process, GHG emissions due to consumption of fossil fuels, electricity, and heat used for fuel production; waste disposal; and the production and procurement of agricultural chemicals, fertilizers, catalysts, and other chemicals must be taken into account.
- (2) When generated CO₂ is captured and sequestered or replaced, it can be deducted from the emissions amount.
- (3) Emission factors determined based on LCA shall be applied to fossil fuels and electricity.

v) Fuel transport process

- (1) In the fuel transport process, GHG emissions due to consumption of fossil fuels, electricity, and heat used for fuel transport as well as storage must be taken into account.
- (2) When raw materials are transported together with other freight articles, the corresponding emissions shall be determined by proportionally distributing the energy consumption of the relevant means of transport according to weight.
- (3) The energy consumption of the return trip must be taken into account.
- (4) Emission factors determined based on LCA shall be applied to fossil fuels and electricity.

vi) Allocation to byproducts

- (1) When a byproduct is produced, its environmental load shall be calculated for each step determined by subdividing the relevant process. If distribution in a mechanical manner is impossible, a manner of distribution for which a rational account can be given may be adopted.
- (2) A byproduct is defined as a substance that uses energy or materials, or a commercially valuable substance that is released to another party for sale.

vii) Method for evaluating GHG-emissions reduction effects

- (1) In LCA, the amount of GHG-emissions reduction shall be calculated using the following formula.

$$\text{Reduction rate} = (E_{\text{fossilfuel}} - E_{\text{biofuel}}) / E_{\text{fossilfuel}}$$

$E_{\text{fossilfuel}}$: GHG emissions amount in gasoline LCA

$E_{\text{bioethanol}}$: GHG emissions amount in bioethanol LCA

- (2) The GHG emissions amount in gasoline LCA shall be 88.74 g-CO₂eq/MJ.

(Remarks 2)

- i) “Allocation” refers to an operation by which the environmental load from an entire process that produces multiple products is distributed to each product.
- ii) “Anaerobic fermentation” refers to the phenomenon in which organic matter is decomposed into CH_4 and/or other substances by bacteria or other organisms that can propagate in the absence of oxygen.
- iii) “Agricultural management method improvements” refer to an approach to increase the carbon stock in soil by improving raw-material cultivation (e.g., transitioning to non-tilled cropping).
- iv) “Carbon capture and sequestration” refer to an approach for reducing CO_2 discharge into the atmosphere by capturing CO_2 emitted from fossil fuel usage and applying underground storage or a similar method to the captured CO_2 .
- v) “Carbon stock” refers to the carbon stored in living plant bodies, withered trees, soil, and so on.
- vi) “Waste and residues” refer to substances that are handled at no charge or under inverse onerous contract, or substances that are disposed of in-house.
- vii) “Direct land-use change” refers to when a forest, grassland, or other type of land that is not farmland is converted into farmland for raw-material production. It does not include indirect land-use changes, which occur when land other than the relevant land increases the amount of farmland or decreases the amount of forest or grassland.
- viii) “Leakage” refers to increased GHG emissions that occur when conventional use of energy materials is disturbed during the process of using waste- or residue-based resources as raw materials for bioethanol (e.g., GHG emissions due to use of heavy oil that become unavoidable in a power-generating installation when the construction waste that was conventionally used for power generation is used as a raw material for ethanol).

Attached Table 2**Default values of GHG emissions amounts in bioethanol LCA used in Japan**

Most bioethanol used in Japan is presumed to be Brazil-produced sugarcane-derived ethanol or U.S.-produced corn-derived ethanol. Accordingly, default values shall be specified for Brazil-produced sugarcane-derived ethanol and U.S.-produced corn-derived ethanol in order to reduce the burdens imposed on petroleum refiners when calculating GHG emissions.

In cases in which technical development or production expansion allow bioethanol other than the above two types to be produced from new raw materials or in new production areas in the future, default values shall be specified for said bioethanol once it is expected to be used in a considerable quantity in Japan.

1. When no direct land-use occurs, the default values for Brazil-produced sugarcane-derived ethanol and those for U.S.-produced corn-derived ethanol shall be the values listed in Tables 1 and 2, respectively.

Table 1: Default values for Brazil-produced sugarcane-derived ethanol (excluding direct land-use changes)

		GHG emissions amount (g-CO ₂ eq/MJ)
Raw-material cultivation	Application of chemicals, etc.	3.59
	Soil (fertilization)	10.02
	Burning	0.26
	Energy consumption of machines	6.01
Raw-material transport		Included above
Ethanol production	Bagasse	0.41
	Application of chemicals, etc.	0.55
Ethanol transport	Within Brazil	2.06
	Sea (Brazil to Japan)	5.69
Total		28.59

Table 2: Default values for U.S.-produced corn-derived ethanol (excluding direct land-use changes)

		GHG emissions amount (g-CO ₂ eq/MJ)
Raw-material cultivation	Application of chemicals, etc.	6.15
	Soil (fertilization)	8.74
	Energy consumption of machines	2.61
Raw-material transport		1.01
Ethanol production	Application of chemicals, etc.	1.07
	Energy consumption of production	10.33
Ethanol transport	Within the US	2.76
	Sea (the U.S. to Japan)	4.20
Total		36.86

2. When a direct land-use change occurs, the default values for Brazil-produced sugarcane-derived ethanol and those for U.S.-produced corn-derived ethanol shall be those obtained by adding the GHG emissions amounts listed in Table 3 or 4 to the total value in Table 1 or 2, respectively.

Table 3: Default values for Brazil-produced sugarcane-derived ethanol (direct land-use changes)

		GHG emissions amount (g-CO ₂ eq/MJ)
No land-use changes (existing farmland)		0
With land-use changes	Conversion from grassland	0
	Conversion from forests	248.7

Table 4: Default values for U.S.-produced corn-derived ethanol (direct land-use changes)

		GHG emissions amount (g-CO ₂ eq/MJ)
No land-use changes (existing farmland)		0
With land-use changes	Conversion from grassland	44.8
	Conversion from forests	151.4

Supplementary provisions

(Date of enforcement)

Article 1. This notification shall come into effect on April 1, 2023.

(Interim measure)

Article 2. The reduction target for GHG emissions in LCA of bioethanol stipulated in 2.(3)1) of this notification shall be less than 45 percent for the time being.

(Considerations)

Article 3. The stipulation in the previous article shall be reviewed, taking the necessary measures so that the value calculated by multiplying new GHG emissions by the reduction standard in the previous article does not exceed the existing value as a result of a change to GHG emissions in LCA of gasoline in Section 1 of the following article.

Article 4. Regarding the GHG emissions in LCA of gasoline in 2.(3)1) in this notification (88.74 gCO₂eq/MJ), the Minister of Economy, Trade, and Industry shall research GHG emissions in each gasoline process after enforcement and conduct other necessary activities, give consideration in light of the same, and take necessary actions based on the conclusions thereof.

2. Regarding the period for target use of next-generation bioethanol in 1.(1) of this notification, the Minister of Economy, Trade, and Industry shall take into account the progress of practical implementation of next-generation bioethanol manufacturing technologies, the quantity of maintained materials, and other factors, shall consider how to move forward the start of the relevant period if the Minister deems doing so to be necessary, and shall take the necessary actions based on the conclusions thereof.

Article 5. Regarding the stipulations with regard to next-generation bioethanol, SAF, and other matters, the Minister of Economy, Trade, and Industry shall take into account the implementation status of this notification, trends in bioethanol, etc. inside and outside Japan, and other matters, shall give consideration to the stipulations of this notification if the Minister deems doing so to be necessary, and shall take the necessary actions based on the conclusions thereof.